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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2665

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,913

Applicant(s)

MITRANI ET AL.

Examiner

Toan D Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,9,10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 7 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7 line 3, "wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF)" is vague and indefinite because it is unclear what's constituted by the Internet Engineering Task Force (IETF). The standard can be changed in the future. Therefore, please clarify so that the meter and boundary of the claimed can be determined and please submit the standard. Similar problem exists in claim 23 line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8-12, 15-18, 20-21, 24-28 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwaller et al. (U.S. Patent 5,881,237).

For claim 1, Schwaller et al. disclose methods, systems and computer program products for test scenario based communications network performance testing, the method comprising:
specifying at least one packet filtering criterion (col. 8 lines 1-15);

transmitting one or more data packets meeting the at least one criterion through the network from one of the end-point to another (figure 9, col. 36 lines 58-62);

intercepting at least one of the data packets meeting the criterion using the network agents at one or more of the respective locations in the network traversed by the at least one of the data packets (col. 36 line 62-67);

recording information regarding the at least one intercepted packet at the one or more respective locations (figure 9A, col. 37 lines 16-28); and

processing the recorded information to analyze a route of the at least one intercepted packet through the network (figure 10, col. 37 lines 29-43).

For claim 2, Schwaller et al. disclose wherein specifying the at least one packet filtering criterion comprises specifying a pattern of data to appear in the one or more packets to be transmitted (col. 8 line 1 to col. 9 line 59).

For claim 3, Schwaller et al. disclose wherein specifying the at least one packet filtering criterion comprises specifying information associated with a data protocol in accordance with which the packets are to be transmitted (col. 8 line 1 to col. 9 line 59).

For claim 4, Schwaller et al. disclose wherein specifying the information associated with the data protocol comprises specifying a Transport Control Protocol (TCP) sequence number to be assigned to the one or more packets to be transmitted (col. 9 lines 35-59).

For claim 5, Schwaller et al. disclose wherein the TCP sequence number comprises an acknowledgment sequence number (col. 34 lines 49-57).

For claim 8, Schwaller et al. disclose wherein the network agents comprise software processes running on nodes of the network at the respective locations (figure 1, col. 6 line 64 to col. 7 line 4).

For claim 9, Schwaller et al. disclose wherein the network agents comprise stand-alone probes (figure 1, col. 33 lines 54-62).

For claim 10, Schwaller et al. disclose wherein recording the information comprises recording times of arrival of the at least one intercepted packet at the respective locations (col. 37 lines 16-28).

For claim 11, Schwaller et al. disclose wherein processing the recorded information comprises determining, responsive to the times of arrival, transit times of the at least one intercepted packet over network links connected to the respective locations and traversed by the at least one intercepted packet (col. 37 lines 16-28).

For claim 12, Schwaller et al. disclose wherein intercepting the at least one of the data packets comprises intercepting multiple data packets, and wherein determining the transit times comprises detecting a jitter in transit of the packets over one of the links (col. 38 lines 24-37).

For claim 15, Schwaller et al. disclose wherein processing the recorded information comprises determining which of a plurality of links in the network were traversed by the at least one intercepted packet (figure 10, col. 37 lines 29-43).

For claim 16, Schwaller et al. disclose methods, systems and computer program products for test scenario based communications network performance testing, the method comprising:

one or more network agents, adapted to be coupled to the network at respective locations (figure 1, col. 7 lines 5-28) and to intercept data packets that meet a predetermined packet

Art Unit: 2665

filtering criterion and traverse the respective locations (col. 36 line 62-67), and to record information regarding the intercepted data packets (figure 9A, col. 37 lines 16-28); and

a testing center (figure 2, col. 7 lines 43-64), configured to convey the criterion to the network agents and to cause one or more data packets meeting the criterion to be transmitted through the network from one of the end-points to another (col. 8 line 34 to col. 10 line 13), and to process the information recorded by the network agents in order to analyze a route of the at least one intercepted packet through the network (figure 10, col. 37 lines 29-43).

For claim 17, Schwaller et al. disclose at least one traffic agent, which is configured to receive instructions from the testing center and, responsive thereto, to transmit the packets meeting the criterion from the one of the end-points to the other (figure 9, col. 36 line 58-62).

For claim 18, Schwaller et al. disclose wherein the packet filtering criterion comprises a pattern of data that is included in the packets transmitted by the at least one traffic agent (col. 8 line 1 to col. 9 line 59).

For claim 20, Schwaller et al. disclose wherein the packet filtering criterion comprises information associated with a data protocol in accordance with which the traffic agent transmits the packets (col. 8 line 1 to col. 9 line 59).

For claim 21, Schwaller et al. disclose wherein the information associated with the data protocol comprises a Transport Control Protocol (TCP) sequence number used by the at least one traffic agent (col. 9 lines 35-59).

For claim 24, Schwaller et al. disclose wherein the network agents comprise software processes running on the nodes of the network at the respective locations (figure 1, col. 6 line 64 to col. 7 line 4).

For claim 25, Schwaller et al. disclose wherein the network agents comprise stand-alone probes (figure 1, col. 33 lines 54-62).

For claim 26, Schwaller et al. disclose wherein the one or more network agents are operative to record times of arrival of the at least one intercepted packet at the respective locations (col. 37 lines 16-28).

For claim 27, Schwaller et al. disclose wherein the testing center is operative to determine, responsive to the recorded times of arrival, transit times of the at least one intercepted packet over the network links connected to the respective locations and traversed by the at least one intercepted packet (col. 37 lines 16-28).

For claim 28, Schwaller et al. disclose wherein the one or more network agents are operative to intercept multiple data packets, and wherein the testing center is adapted to detect a jitter in transit of the packets over one of the links (col. 38 lines 24-37).

For claim 30, Schwaller et al. disclose wherein the testing center is operative to determine which of the links in the network were traversed by the at least one intercepted packet (figure 10, col. 37 lines 29-43).

For claim 31, Schwaller et al. disclose methods, systems and computer program products for test scenario based communications network performance testing, the method comprising:

a computer-readable medium in which program instructions are stored, which instructions, when read by a computer (figure 1, col. 7 lines 5-28), cause the computer to specify a packet filtering criterion and to engender transmission of one or more data packets meeting the criterion through the network from one of the end-points to another (col. 36 line 62-67), such that at least one of the data packets meeting the criterion is intercepted using the network agents at

the respective locations in the network traversed by the packets, which agents record information regarding the at least one intercepted packet at the respective locations (figure 9A, col. 37 lines 16-28), and which instructions further cause the computer to receive and process the recorded information so as to analyze a route of the at least one intercepted packet through the network (figure 10, col. 37 lines 29-43).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6, 13-14, 19, 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller et al. (U.S. Patent 5,881,237) in view of McKee et al. (U.S. Patent 5,477,531).

For claims 6, 13-14, 19, 22 and 29, Schwaller et al. disclose wherein the plurality of end-points comprises a source end-point and a destination end-point (figure 2, col. 7 lines 29-35).

Art Unit: 2665

However, Schwaller et al. do not disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion.

In an analogous art, McKee et al. disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion (col. 4 lines 3-20). McKee et al. disclose further wherein the plurality of end-points comprises a source end-point and a destination end-point, and wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving corresponding echo packets returned from the destination end-point, both the original and the echo packets meeting the criterion, and wherein determining the transit times comprises determining round-trip transit times by intercepting both the original packets and the corresponding echo packets (col. 6 lines 17-20 as set forth in claim 13); wherein transmitting the original packets comprises transmitting a Transport Control Protocol (TCP) initialization packet having a first, specified TCP sequence number, and wherein receiving the echo packets comprises receiving a TCP connection acknowledgment packet having a second TCP sequencer number, which is determined responsive to the first TCP sequence number (col. 4 lines 3-20 as set forth in claim 14); wherein the at least one traffic agent comprises first and second traffic agents at respective network endpoints, and wherein responsive to receiving one of the packets with the pattern of data transmitted by the first traffic agent, the second traffic agent returns a data packet comprising the

Art Unit: 2665

pattern of data to the first traffic agent (col. 4 lines 3-20 as set forth in claim 19); wherein the plurality of end-points comprises a source end-point and a destination end-point, and wherein the one or more data packets meeting the criterion comprise original packets sent from the source end-point to the destination end-point and echo packets returned from the destination end-point responsive to the original packets, both the original and the echo packets meeting the criterion (col. 4 lines 3-20 as set forth in claim 22) and wherein the determined transit times comprises round-trip transit times, determined by transmitting original packets from a source end-point to a destination end-point, and receiving corresponding echo packets returned from the destination end-point responsive to the original packets, both the original and the echo packets meeting the criterion, wherein both the original packets and the corresponding echo packets are intercepted by the one or more network agents (col. 6 lines 17-20 as set forth in claim 29).

One skilled in the art would have recognized transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion to use the teachings of McKee et al. in the system of Schwaller et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion as taught by McKee et al. in Schwaller et al.'s system with the motivation being to measure the round trip time (Abstract line 8).

7. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller et al. (U.S. Patent 5,881,237) in view of Iddon et al. (U.S. Patent 5,634,009).

For claims 7 and 23, Schwaller et al. do not disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF). In an analogous art, Iddon et al. disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF) (col. 5 line 51). One skilled in the art would have recognized Remote Network Monitoring (RMON) elements to use the teachings of Iddon et al. in the system of Schwaller et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the Remote Network Monitoring (RMON) elements as taught by Iddon et al. in Schwaller et al.'s system with the motivation being determine a minimum set of tables (col. 5 lines 54-56).

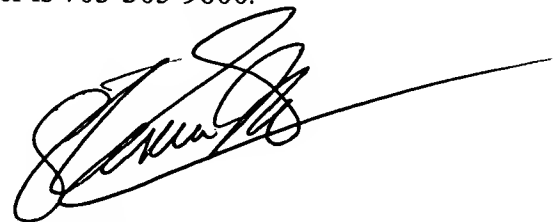
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

T.N.



STEVEN H. D NGUYEN
PRIMARY EXAMINER